

CLAIMS

We claim:

5 1. A method of performing a surgical reconstruction of an anterior cruciate ligament, comprising:

10 providing a bone-tendon graft comprising at least one bone plug connected to a section of tendon, the bone plug having an outer surface;

15 drilling a first substantially longitudinal bone tunnel into a patient's tibia;

20 drilling a second substantially longitudinal bone tunnel into a femur, and said second bone tunnel having an inner surface;

25 inserting the bone plug into the femoral tunnel; and,

30 introducing an adhesive into the femoral tunnel, wherein the adhesive is in at least partial contact with the outer surface of the bone plug and the inner surface of the femoral bone tunnel.

35 2. The method of claim 1 wherein the bone tendon graft comprises a section of patellar tendon having a

proximal end and a distal end, a patellar bone plug attached to the distal end of the tendon and a tibial bone plug attached to the proximal end of the tendon.

5 3. The method of claim 1 wherein the adhesive is a bone glue.

 4. The method of claim 1 wherein the adhesive is a bone cement.

 5. The method of claim 3 wherein the glue is bioabsorbable.

 6. The method of claim 4 wherein the cement is bioabsorbable.

 7. The method of claim 1, wherein a transverse bone tunnel is drilled into the femur substantially transverse to the femoral tunnel, wherein the transverse tunnel is in communication with the femoral tunnel.

 8. The method of claim 7 wherein the adhesive is introduced by injecting through the transverse tunnel into the femoral tunnel.

 9. The method of claim 1, wherein the femoral tunnel is a blind bore hole, having a distal bottom.

10. The method of claim 9, wherein a suture tunnel substantially in alignment with the femoral tunnel is drilled through the distal bottom and out through the femoral bone such that the suture tunnel is in communication with the femoral tunnel.

11. The method of claim 10, wherein the adhesive is introduced into the femoral tunnel through the suture tunnel.

12. The method of claim 10, wherein the bone plug has a suture mounted thereto.

13. The method of claim 12, wherein the adhesive comprises a frangible capsule having an interior volume containing adhesive that is placed into the femoral bore hole prior to inserting the bone plug.

14. The method of claim 1 wherein the adhesive is introduced into the femoral tunnel prior to inserting the femoral bone plug.

15. The method of claim 2 additionally comprising the step of fixating the tibial bone plug in the tibial tunnel.

16. The method of claim 1 wherein the bone plug comprises autologous bone.

17. The method of claim 1 wherein the bone plug comprises an artificial bone substitute material.

5 18. The method of claim 1 wherein the tendon comprises an artificial tendon substitute material.

19. The method of claim 3 wherein the glue comprises 2-octyl cyanoacrylate.

20 20. The method of claim 4 wherein the cement comprises polymethylmethacrylate.

21. A method of fixating a bone plug in a bone tunnel, comprising:

15 providing a bone plug the bone plug having an outer surface;

20 drilling bone, said bone tunnel having an inner surface;

inserting the bone plug into the bone tunnel; and,

25 introducing an adhesive into the bone tunnel,

wherein the adhesive is in at least partial contact with the outer surface of the bone plug and the inner surface of the bone tunnel.